

REMARKS

Applicants concurrently file herewith an Excess Claim Fee Payment Letter, and corresponding excess claim fee, for two (2) excess total claims.

Claims 1-35 are pending in this application. Applicants have amended the claims for clarity. Applicants have added new claims 34 and 35 to claim an additional feature of the invention.

Claims 1-5, 10, 11, 13-17, 19-22, 24-28, and 30-32 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zhang (U.S. Patent No. 6,578,998) in view of Newby (U.S. Patent No. 6,999,318). Claims 6-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang, in view of Newby and further in view of Suehiro, et al. (U.S. Patent Application Publication No. US 2002/0024808; hereinafter “Suehiro”), Bukosky (U.S. Patent No. 6,076,948) and Chen (U.S. Patent No. 6,733,156). Claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang, in view of Newby, and further in view of Gorczyca (U.S. Patent No. 6,800,373). Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang, in view of Newby, and further in view of Hecht (U.S. Patent No. 6,871,993). Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang, in view of Newby, and further in view of Lowery (U.S. Patent No. 5,959,316). Claim 23 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang, in view of Newby and further in view Camras, et al. (U.S. Patent No. 6,733,156; hereinafter “Camras”). Claims 29 and 33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Newby in view of Zhang.

Claims 1, 2, 14 and 29 are also provisionally rejected under the judicially created doctrine of non-statutory double patenting over co-pending U.S. Patent Application 11/411,144.

Applicants respectfully traverse these rejections in the following discussion.

I. THE CLAIMED INVENTION

The invention of claim 1, for example, is directed to a light emitting apparatus that includes a light source section having a solid-state light emitting element, a power supply member that supplies power to the light source section, a reflection section that is disposed opposite to a light extraction surface of the light source section to reflect light emitted from the light source section, a heat radiation member that is disposed with a heat radiation width in a back direction of the light source section, and an insulating layer disposed between the power supply section and the heat radiation section. The heat radiation member includes a planar member disposed parallel to a light extraction direction of the light emitting apparatus, and the power supply member, which is separate from the heat radiation member, is secured to an end face of the planar member (Application at page 11, lines 23-25, page 12, lines 10-11, page 13, lines 16-21 and page 14, lines 8-12).

This structure is important because the planar member alone can prevent the blocking of light that is emitted from the light emitting element. Further, because the power supply section is formed along a bottom of the planar member, the invention has the effect that the heat radiation section can efficiently radiate heat generated from the power supply section during the operation of the light emitting element. In addition,

since the power supply section is insulated from the heat radiation section by the insulation layer disposed therebetween and the heat radiation section (planar member) elongates in the height direction of the apparatus, a steep heat gradient can be formed in the height direction, i.e., between the power supply section and the top of the heat radiation section (planar member), so that the heat generated from the power supply section (lead) can be more quickly transmitted through the heat radiation section (Application at page 2, lines 25-28 and page 14, lines 8-20)

In a conventional light emitting apparatus, as described in the Background of the present application, if the size of a power lead is increased to cope with increased heat generation from the light source, the light emission efficiency is decreased due to blockage of the light by the enlarged power lead (Application at page 2, lines 17-24).

In contrast, an exemplary aspect of this invention may provide for dissipation of heat from the light source without interfering with light emission (Application at page 14, lines 7-21).

II. THE PRIOR ART REJECTIONS

A. The Alleged Combination of Zhang and Newby

The Examiner alleges that Zhang and Newby would have been combined to teach the claimed invention of claims 1-5, 10, 11, 13-17, 19-22, 24-28, and 30-32. Similarly, the Examiner alleges that Newby and Zhang would have been combined to teach the claimed invention of claims 29 and 33. Applicants respectfully submit, however, that, even if combined, the alleged combination of references does not teach or suggest each and every feature of the claimed invention.

That is, neither Zhang nor Newby teaches or suggests, “*wherein the heat radiation member comprises a planar member disposed parallel to a light extraction direction of the light emitting apparatus, and the power supply member, which is separate from said heat radiation member, is secured to an end face of the planar member*”, as recited in exemplary claim 1, and similarly recited in exemplary claims 2, 14, and 29.

With respect to claims 1-5, 10, 11, 13-17, 19-22, 24-28, and 30-32, the Examiner alleges that Zhang teaches a power supply section that is formed along a bottom of the planar member. The Examiner, however, is clearly incorrect.

First, Applicants submit that the Examiner’s rejection, specifically the remarks relating to Zhang are unclear. That is, the Examiner has analogized the supporting bridge 31 of Zhang to the power supply member and the heat radiation member (e.g., see Office Action dated July 13, 2007 at pages 2-3). Furthermore, in the Response to Arguments section of the Office Action, the Examiner further analogizes the supporting bridge 31 of Zhang to the planar member of the claimed invention (see Office Action dated July 13, 2007 at page 14).

Accordingly, it is not clear to Applicants how the supporting bridge 31 (i.e., the alleged power supply member) is formed along a bottom of the supporting bridge 31 (i.e., the alleged planar member).

In the rejection of claims 1-5, 10, 11, 13-17, 19-22, 24-28, and 30-32 the Examiner also analogizes the horizontal supporting arms 311, 312 of the supporting bridge 31 to the claimed planar member. It is also not clear how the supporting bridge 31 (i.e., the alleged power supply member) is formed along a bottom of the horizontal supporting arms 311, 312 of the supporting bridge 31.

Essentially, the Examiner's rejection alleges that the supporting bridge is formed along itself.

Furthermore, Applicants submit that the only features of Zhang that are formed along a bottom of either the supporting bridge 31 or the horizontal supporting arms 311, 312 of the supporting bridge 31 is the circuit board 15 (e.g., see Zhang at Figure 2).

If the Examiner wishes to maintain this rejection, the Examiner is respectfully requested to specifically and clearly set forth which features of Zhang he is analogizing to each feature of the claimed invention.

Moreover, regarding claim 3, the Examiner relies on col. 3, lines 13-21 of Zhang as teaching "the light emitting apparatus wherein the heat radiation section comprises a same material as the case." However, Zhang fails to disclose or suggest that the material comprising the supporting bridge, that the Examiner considers as corresponding to the heat radiation section, is of the same material as the four supporting walls 12 of the box.

In the Response to Arguments section of the Office Action dated, the Examiner alleges that Zhang teaches "the entire cell body can be made of light reflecting material such as aluminum, silver, or titanium to provide the light projecting surface." (See Office Action dated July 13, 2007 at page 14).

Applicants respectfully submit, however, that the supporting bridge 31 (which the Examiner analogizes to the heat radiation section of the claimed invention) is not part of the cell body 10.

Therefore, Zhang does not teach or suggest each and every feature of the claimed invention.

Moreover, with respect to claims 29 and 33, the Examiner alleges that Newby teaches power supply section 42 formed along a bottom of the planar member of the heat radiation section 46.

Applicants submit, however, that the alleged power supply section 42 is not formed along the alleged heat radiation section 46 (see Newby at Figure 3B).

Therefore, Newby does not teach or suggest each and every feature of the claimed invention.

Accordingly, since the alleged combination of references does not teach or suggest each and every of the claimed invention, the Examiner is respectfully requested to reconsider and withdraw these rejections.

**B. The Suehiro, Bukosky, Chen, Gorczyca, Hecht, Lowery, and Camras
References**

The Examiner alleges that Suehiro, Bukosky, and Chen would have been combined with Zhang and Newby to teach the claimed invention of claims 6-8. Furthermore, the Examiner alleges that Gorczyca would have been combined with Zhang and Newby to teach the claimed invention of claim 9. Furthermore, the Examiner alleges that Hecht would have been combined with Zhang and Newby to teach the claimed invention of claim 12. Furthermore, the Examiner alleges that Lowery would have been combined with Zhang and Newby to teach the claimed invention of claim 18. Furthermore, the Examiner alleges that Camras would have been combined with Zhang and Newby to teach the claimed invention of claim 23.

Applicants respectfully submit that dependent claims 6-9, 12, 18, and 23 are allowable over any combination of the applied references, at least based on similar reasons to those previously set forth and set forth above in section A.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw these rejections.

III. DOUBLE PATENTING

It is alleged in the Office Action that claims 1, 2, 14 and 29 are obvious over the judicially created doctrine of obviousness-type double patenting in view of U.S. Patent Application 11/411,144.

However, when rejecting claims under the judicially created doctrine of obviousness-type double patenting, the Examiner must properly define the subject matter of the claims at issue and the difference between those claims and the claims in the applied reference.

Further, according to MPEP §804, when making an obviousness-type double patenting rejection, the Examiner should make clear (a) the differences between the inventions defined by conflicting claims – a claim in the reference compared to a claim in the application; and (b) the reasons why a person of ordinary skill in the art would conclude that the invention is an obvious variation of the invention defined in a claim of the reference.

As there has been no attempt to properly define the subject matter of the claims at issue and the difference between those claims and the claims in the applied reference, or meet the requirements of MPEP §804, a *prima facie* case of obviousness-type double

patenting has not been established. In fact, there is not even a claim of U.S. Patent Application 11/411,144 that is alleged to render claims 1, 2, 14 and 29 obvious.

Therefore, the provisional rejection is improper and should be withdrawn. Moreover, there are elements of claims 1, 2, 14 and 29 that are not disclosed or suggested by any of claims 1-9 of U.S. Patent Application 11/411,144.

Applicants submit that the above argument and comments were previously submitted to the Examiner. The Examiner, however, has maintained the same rejection (the Examiner repeated the previous rejection verbatim) without responding to Applicants' traversal arguments.

If the Examiner wishes to maintain this rejection, Applicants respectfully request the Examiner to respond to Applicants' traversal arguments.

IV. NEW CLAIMS

Applicants have added new claims 34 and 35 to claim additional features of the invention and to provide varied protection for the claimed invention. These claims are independently patentable because of the novel and non-obvious features recited therein.

New claims 34 and 35 are patentable over any combination of the cited references at least based on analogous reasons to those set forth above with respect to claims 1-33.

V. STATEMENT OF SUBSTANCE OF INTERVIEW

As a preliminary matter, Applicants' representative would like to thank the Examiner for courtesies extended in the telephone interview conducted on October 3, 2007.

An Examiner's Interview Summary Record (PTOL-413) was provided by the Examiner by facsimile after the interview on October 3, 2007.

Applicants submit this Statement to comply with the requirements of M.P.E.P. § 713.04.

In the interview, the following was discussed:

A. Identification of claims discussed:

Claim 1.

B. Identification of prior art discussed:

Zhang (U.S. Patent No. 6,578,998).

C. Identification of principal proposed amendments:

None.

D. Brief Identification of principal arguments:

Applicants' representative respectfully pointed out that, even if combined, the alleged combination of Newby and Zhang does not teach or suggest each and every feature of the claimed invention.

That is, neither Zhang nor Newby teaches or suggests, "*the power supply section is formed along a bottom of the planar member*", as recited in exemplary claim 1, and similarly recited in exemplary claims 2, 14, and 29.

With respect to claims 1-5, 10, 11, 13-17, 19-22, 24-28, and 30-32, the Examiner alleges that Zhang teaches a power supply section that is formed along a bottom of the planar member. The Examiner, however, is clearly incorrect.

First, Applicants submit that the Examiner's rejection, specifically the remarks relating to Zhang are unclear. That is, the Examiner has analogized the supporting bridge 31 of Zhang to the power supply section and the heat radiation section (e.g., see Office Action dated July 13, 2007 at pages 2-3). Furthermore, in the Response to Arguments section of the Office Action, the Examiner further analogizes the supporting bridge 31 of Zhang to the planar member of the claimed invention (see Office Action dated July 13, 2007 at page 14).

Accordingly, it is not clear to Applicants how the supporting bridge 31 (i.e., the alleged power supply section) is formed along a bottom of the supporting bridge 31 (i.e., the alleged planar member).

In the rejection of claims 1-5, 10, 11, 13-17, 19-22, 24-28, and 30-32 the Examiner also analogizes the horizontal supporting arms 311, 312 of the supporting bridge 31 to the claimed planar member. It is also not clear how the supporting bridge 31 (i.e., the alleged power supply section) is formed along a bottom of the horizontal supporting arms 311, 312 of the supporting bridge 31.

Essentially, the Examiner's rejection, as understood Applicants, alleges that the supporting bridge is formed along itself.

Furthermore, Applicants submit that the only features of Zhang that are formed along a bottom of either the supporting bridge 31 or the horizontal supporting arms 311, 312 of the supporting bridge 31 is the circuit board 15 (e.g., see Zhang at Figure 2).

Moreover, regarding claim 3, the Examiner relies on col. 3, lines 13-21 of Zhang as teaching “the light emitting apparatus wherein the heat radiation section comprises a same material as the case.” However, Zhang fails to disclose or suggest that the material comprising the supporting bridge, that the Examiner considers as corresponding to the heat radiation section, is of the same material as the four supporting walls 12 of the box.

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Applicants respectfully submit, however, that the supporting bridge 31 (which the Examiner analogizes to the heat radiation section of the claimed invention) is not part of the cell body 10.

Therefore, Zhang does not teach or suggest each and every feature of the claimed invention.

Moreover, with respect to claims 29 and 33, the Examiner alleges that Newby teaches power supply section 42 formed along a bottom of the planar member of the heat radiation section 46.

Applicants submit, however, that the alleged power supply section 42 is not formed along the alleged heat radiation section 46 (see Newby at Figure 3B).

Therefore, Newby does not teach or suggest each and every feature of the claimed invention.

E. Results of the Interview:

In response to the arguments presented, the Examiner indicated that supporting bridge 31 taught both a heat radiation section and a power supply section.

F. Conclusion:

Applicant respectfully disagrees with the Examiner. However, merely in an effort to speed prosecution, Applicants have amended the claims to define the claimed invention more particularly.

VI. FORMAL MATTERS AND CONCLUSION

The Examiner has objected to claims 1, 2, 14, and 29 because Applicants allegedly implied that insulating layer 15a is thermally insulating.

Applicants respectfully submit, however, that claims 1, 2, 14, and 29 do not recite “thermally” and Applicants remarks in the previous Amendment did not recite “thermally”. Accordingly, Applicants respectfully submit that it is not necessary to amend the claims because the claims are clear and definite.

In view of the foregoing, Applicants submit that claims 1-35, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone

number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

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Respectfully Submitted,



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